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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/785,273	02/24/2004	Lowell L. Winger	03-1431 1496.00341	3873
22501 7590 08/25/2009 CHRISTOPHER P MAIORANA, PC LSI Corporation 24840 HARPER SUITE 100 ST CLAIR SHORES, MI 48080				
EXAMINER				
ANYIKIRE, CHIKAODILI E				
ART UNIT		PAPER NUMBER		
2621				
MAIL DATE		DELIVERY MODE		
08/25/2009		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/785,273

Applicant(s)

WINGER ET AL.

Examiner

CHIKAODILI E. ANYIKIRE

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 June 2009.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-18 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 24 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-8508)
4) ☐ Interview Summary (PTO-413)
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____
Paper No(s)/Mail Date _____

DETAILED ACTION

1. This application is responsive to application number (10/785273) filed on February 24, 2004. Claims 1 – 18 are pending and have been examined.

Response to Arguments

2. Applicant's arguments filed June 02, 2009 have been fully considered but they are not persuasive. Claims 1- 18 are pending.

The applicant argues Jeon teachings with regard to step C of claim 1 (Amendment of June 02, 2009, page 8 lines 19-21). The examiner respectfully disagrees. Step C as read by the examiner reads as finding the smallest reference index value in association to the current list, which Jeon teaches that the smallest value is used for the direct mode process which is applied to the current block.

The applicant argues Jeon teachings with regard to step D of claim 1 (Amendment of June 02, 2009, page 9 lines 1-20). The examiner respectfully disagrees. Jeon discloses using inter-prediction in paragraph [0111], but in regards to the second reference picture there are equations relating to motion vectors that further relate to the reference pictures in a video sequence (paragraph [0111]).

The applicant further takes issue with claim 3, but it is not understood by the examiner the issue since Jeon does teach having storage and the unique identifier as stated in the claim limitation can be broadly interpreted as the index that identifies the reference picture.

Claim Rejections - 35 USC § 102

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3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-18 are rejected under 35 U.S.C. 102(e) as being anticipated by Jeon (2004/0066848).

As per **claims 1 and 10**, Jeon discloses a method and apparatus for determining a first and a second reference picture used for inter-prediction of a block, comprising the steps of:

(A) finding a co-located picture and block (paragraph [0088] Ln 1-2);

(B) determining a reference index (paragraph [0088] Ln 9-12 and [0089]);

(C) mapping the reference index to a lowest valued reference index in a current reference list (paragraph [0090]); and

(D) using said reference index to determine said second reference picture (paragraph [0111]); the prior art discloses two reference pictures in a list0 and list1, which represents a first and second reference picture), wherein said first and second reference pictures are used for inter-prediction of said current block (paragraph [0111]; as evidenced by Jeon the two reference pictures list0 and list1 are used for inter-prediction of the B-frame and calculates motion vectors corresponding to each list).

As per **claims 2 and 11**, Jeon discloses the method and apparatus according to claims 1 and 10, wherein said block comprises an H.264 direct-mode macroblock or macroblock partition ([0011] Ln 6 – 10; the prior art discloses the direct-mode in conjunction H.264 on a slice level and can also be performed on a macroblock since a slice is made up of macroblocks.).

As per **claims 3 and 12**, Jeon discloses the method and apparatus according to claims 1 and 10, wherein step (C) further comprises:

storing a unique identifier for each reference picture ([0005] Ln 1-4; the prior art discloses a buffer, which is used to store the reference picture and an index to identify the reference picture), wherein said unique identifier is associated from (i) when said unique identifier was used as an inter-reference in the co-located picture to ([0097]) (ii) when said unique identifier is made available as a potential List0 inter-reference for the current picture ([0097]).

As per **claims 4 and 13**, Jeon discloses the method and apparatus according to claims 1 and 10, further comprising the step of:

storing a unique identifier of a direct-mode reference picture ([0005] Ln 1-4; the prior art discloses a buffer, which is used to store the reference picture and an index to identify the reference picture).

As per **claims 5 and 14**, Jeon discloses the method and apparatus according to claims 4 and 13, wherein said direct-mode operates on (i) a macroblock when in a first configuration and (ii) a macroblock partition when in a second configuration ([0087], the

prior art discloses four different combination, configurations, for a frame mode and field mode, which are made up of macroblocks; the prior art discloses performing the method on a slice level ([0011] Ln 6-11)).

As per **claims 6 and 15**, Jeon discloses the method and apparatus according to claims 4 and 13, further comprising the step of:

searching the current reference List0 for the lowest valued reference index identifier by said unique identifier and returning the value of said lowest valued reference index ([0090]; the prior art discloses search for the lowest reference index, unique identifier, and return the value by determining the reference picture index).

As per **claims 7 and 16**, the method and apparatus according to claims 1 and 10, wherein said method and apparatus further comprising the step of:

implementing an interpolative direct-mode prediction and a flexible choice for the picture referenced by a finite index reference ([0093]; the prior art discloses performing a motion vector prediction, interpolative direct-mode prediction, and the reference pictures are referenced by an index number that is finite).

As per **claims 8 and 17**, Jeon discloses the method and apparatus according to claims 1 and 10, wherein said method is implemented in a video encoder ([0014] Ln 2-5 and [0018] Ln 4; the prior art discloses a coding system and makes reference to a compression technique).

As per **claims 9 and 18**, Jeon discloses the method and apparatus according to claims 1 and 10, wherein said method is implemented in a video decoder ([0018] Ln 1-8; the prior art discloses a coding system and makes reference to a decoded picture therefore a decoder is part of the coding system, which is well known in the art).

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHIKAODILI E. ANYIKIRE whose telephone number is (571)270-1445. The examiner can normally be reached on Monday to Friday, 7:30 am to 5 pm, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha D. Banks-Harold can be reached on (571) 272 - 7905. The fax

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phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Marsha D. Banks-Harold/
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